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- 09/657, 687
- 1** **Augmented reality and mobile systems II: Meeting the spirit of history 100%**  
Ursula Kretschmer , Volker Coors , Ulrike Spierling , Dieter Grasbon , Kerstin Schneider , Isabel Rojas , Rainer Malaka  
Proceedings of the 2001 conference on Virtual reality, archeology, and cultural heritage November 2001  
This paper describes a research and development project for a novel technology, making the conveyance of cultural heritage during a historic sightseeing tour a unique experience. The cornerstones of this system are mobile augmented reality, including a hybrid tracking approach, intelligent queries to pose complex questions about geographical and historical knowledge, as well as a story engine to interactively run a digital story. This system involves the user in a thrilling story while exploring ...

- 2** **Research sessions: query processing II: Efficient k-NN search on 100%**  
vertically decomposed data  
Arjen P. de Vries , Nikos Mamoulis , Niels Nes , Martin Kersten  
Proceedings of the 2002 ACM SIGMOD international conference on Management of data June 2002  
Applications like multimedia retrieval require efficient support for similarity search on large data collections. Yet, nearest neighbor search is a difficult problem in high dimensional spaces, rendering efficient applications hard to realize: index structures degrade rapidly with increasing dimensionality, while sequential search is not an attractive solution for repositories with millions of objects. This paper approaches the problem from a different angle. A solution is sought in an unconvent ...

- 3** IS '97: model curriculum and guidelines for undergraduate degree programs in information systems 100%  
Gordon B. Davis , John T. Gorgone , J. Daniel Couger , David L. Feinstein , Herbert E. Longenecker  
ACM SIGMIS Database , Guidelines for undergraduate degree programs on Model curriculum and guidelines for undergraduate degree programs in information systems December 1997  
Volume 28 Issue 1
- 4** Mobility and Wireless Access: Personalized pocket directories for mobile devices 100%  
Doron Cohen , Michael Herscovici , Yael Petruschka , Yoëlle S. Maarek , Aya Soffer  
Proceedings of the eleventh international conference on World Wide Web May 2002  
In spite of the increase in the availability of mobile devices in the last few years, Web information is not yet as accessible from PDAs or WAP phones as it is from the desktop. In this paper, we propose a solution for supporting one of the most popular information discovery mechanisms, namely Web directory navigation, from mobile devices. Our proposed solution consists of caching enough information on the device itself in order to conduct most of the navigation actions locally (with subsecond r ...
- 5** Multimedia: OCTOPUS: aggressive search of multi-modality data using multifaceted knowledge base 100%  
Jun Yang , Qing Li , Yueting Zhuang  
Proceedings of the eleventh international conference on World Wide Web May 2002  
An important trend in Web information processing is the support of multimedia retrieval. However, the most prevailing paradigm for multimedia retrieval, content-based retrieval (CBR), is a rather conservative one whose performance depends on a set of specifically defined low-level features and a carefully chosen sample object. In this paper, an aggressive search mechanism called *Octopus* is proposed which addresses the retrieval of multi-modality data using multifaceted knowledge. In parti ...
- 6** Logistics/transportation applications: General topics: a voice assisted simulation-animation architecture 100%  
Raymond L. Smith , Stephen D. Roberts  
Proceedings of the 32nd conference on Winter simulation December 2000  
This paper introduces a software architecture that has been used to enable voice assistance for a simulation-animation environment by integrating technologies that recognize spoken language input and generate spoken language output. Voice assisted technology has several features which make user navigation within complex software applications easier than traditional methods, such as key-typed

commands or mouse manipulation. While this environment might be more friendly to an end user, several cha ...

**7** Efficient web browsing on handheld devices using page and form summarization 100%



ACM Transactions on Information Systems (TOIS) January 2002  
Volume 20 Issue 1

We present a design and implementation for displaying and manipulating HTML pages on small handheld devices such as personal digital assistants (PDAs), or cellular phones. We introduce methods for summarizing parts of Web pages and HTML forms. Each Web page is broken into text units that can each be hidden, partially displayed, made fully visible, or summarized. A variety of methods are introduced that summarize the text units. In addition, HTML forms are also summarized by displaying just the t ...

**8** Knowledge encapsulation for focused search from pervasive devices 100%



Yariv Aridor , David Carmel , Yoelle S. Maarek , Aya Soffer , Ronny Lempel  
ACM Transactions on Information Systems (TOIS) January 2002  
Volume 20 Issue 1

Mobile knowledge seekers often need access to information on the Web during a meeting or on the road, while away from their desktop. A common practice today is to use pervasive devices such as Personal Digital Assistants or mobile phones. However, these devices have inherent constraints (e.g., slow communication, form factor) which often make information discovery tasks impractical. In this paper, we present a new focused-search approach specifically oriented for the mode of work and the constrai ...

**9** Software infrastructure for parallel visualization: Jupiter: a toolkit for interactive large model visualization 100%



Dirk Bartz , Dirk Staneker , Wolfgang Straßer , Brian Cripe , Tom Gaskins , Kristann Orton , Michael Carter , Andreas Johannsen , Jeff Trom  
Proceedings of the IEEE 2001 symposium on parallel and large-data visualization and graphics October 2001

The fast increasing size of datasets in scientific computing, mechanical engineering, or virtual medicine is quickly exceeding the graphics capabilities of modern computers. Toolkits for the large model visualization address this problem by combining efficient geometric techniques, such as occlusion and visibility culling, mesh reduction, and efficient rendering. In this paper, we introduce *Jupiter*, a toolkit for the interactive visualization of large models which exploits the above mentio ...

**10** Streaming 1: Optimal delivery of multi-media content over networks 100%




Arthur Allen  
Proceedings of the ninth ACM international conference on Multimedia October 2001

In this paper, we describe scalable optimal methods for delivering

archived and live multi-media content from servers to multi-media client players endowed with substantial RAM or disk-based buffers. These methods result from the application of linear optimization theory (linear programming) to the problem of how best to modulate the flow rate of constant-bit-rate (CBR) content for all sessions linking a server to its clients, in which session flow rates are subject to upper and lower bound const ...

**11** Computing curricula 2001 100%

 Journal of Educational Resources in Computing (JERIC) September 2001

**12** WordsEye: an automatic text-to-scene conversion system 100%

 Bob Coyne , Richard Sproat  
Proceedings of the 28th annual conference on Computer graphics and interactive techniques August 2001


Natural language is an easy and effective medium for describing visual ideas and mental images. Thus, we foresee the emergence of language-based 3D scene generation systems to let ordinary users quickly create 3D scenes without having to learn special software, acquire artistic skills, or even touch a desktop window-oriented interface. WordsEye is such a system for automatically converting text into representative 3D scenes. WordsEye relies on a large database of 3D models and poses to depict ...

**13** Searching the Web 100%

 ACM Transactions on Internet Technology (TOIT) August 2001  
Volume 1 Issue 1

We offer an overview of current Web search engine design. After introducing a generic search engine architecture, we examine each engine component in turn. We cover crawling, local Web page storage, indexing, and the use of link analysis for boosting search performance. The most common design and implementation techniques for each of these components are presented. For this presentation we draw from the literature and from our own experimental search engine testbed. Emphasis is on introduci ...

**14** Educating software engineering students to manage risk 100%

 Barry Boehm , Daniel Port  
Proceedings of the 23rd international conference on Software engineering July 2001

In 1996, USC switched its core two-semester software

engineering course from a hypothetical-project, homework-and-exam course based on the Bloom taxonomy of educational objectives (knowledge, comprehension, application, analysis, synthesis, evaluation). The revised course is a real-client team-project course based on the CRESST model of learning objectives (content understanding, problem solving, collaboration, communication, and self-regulation). We used the CRESST cognitive demands analysis ...

- 15** Locally adaptive dimensionality reduction for indexing large time series databases 100%



Eamonn Keogh , Kaushik Chakrabarti , Michael Pazzani , Sharad Mehrotra  
ACM SIGMOD Record , Proceedings of the 2001 ACM SIGMOD international conference on Management of data May 2001  
Volume 30 Issue 2

Similarity search in large time series databases has attracted much research interest recently. It is a difficult problem because of the typically high dimensionality of the data.. The most promising solutions involve performing dimensionality reduction on the data, then indexing the reduced data with a multidimensional index structure. Many dimensionality reduction techniques have been proposed, including Singular Value Decomposition (SVD), the Discrete Fourier transform (DFT), and the Discr ...

- 16** Same words, different meanings: are basic IS/IT concepts our self-imposed Tower of Babel? 100%



Steven Alter  
Communications of the AIS May 2000

- 17** Information technology, process reengineering, and performance measurement: a balanced scorecard analysis of Compaq computer corporation 100%



William F. Wright , Rodney Smith , Ryan Jesser , Mark Stupeck  
Communications of the AIS February 1999

- 18** Knowledge encapsulation for focused search from pervasive devices 100%



Yariv Aridor , David Carmel , Yoëlle S. Maarek , Aya Soffer , Ronny Lempel  
Proceedings of the tenth international conference on World Wide Web April

2001

- 19** Seeing the whole in parts: text summarization for web browsing on 100%  
handheld devices

Orkut Buyukkokten , Hector Garcia-Molina , Andreas Paepcke  
Proceedings of the tenth international conference on World Wide Web April  
2001



- 20** Performance of a computational fluid dynamics code on NEC and Cray 100%  
supercomputers: beyond 10 gigaflops

Ferhat F. Hatay  
Proceedings of the 1996 ACM/IEEE conference on Supercomputing (CDROM)  
November 1996

The implementation and optimization of a production mode  
Computational Fluid Dynamics (CFD) software to NEC and Cray  
supercomputing platforms are discussed. It is intended to assess the  
impact of different computer architectures and High Power Computing  
approaches while studying a problem of engineering and scientific  
importance. The computational model solves the viscous compressible  
flow equations for high-speed wall-shear layer flows. The code is very  
versatile and has performed extremel ...

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**21** Decomposing polygon meshes for interactive applications 100%

Xuetao Li , Tong Wing Toon , Zhiyong Huang  
Proceedings of the 2001 symposium on Interactive 3D graphics March 2001

**22** On proxy agents, mobility, and web access 100%

Anupam Joshi  
Mobile Networks and Applications December 2000  
Volume 5 Issue 4

With the emerging need for ubiquitous access to information, web access from mobile clients is gaining increasing importance. Unfortunately, the underlying protocols of the web are not designed to support operations from a resource poor platform in a low bandwidth, disconnection prone environment. Efforts to create systems to support mobile browsing have typically been proxy&dash;based. However, such solutions have recently been criticized due to their non&dash;scalability. Developments in ad ...


**23** Curriculum 68: Recommendations for academic programs in computer 100%

science: a report of the ACM curriculum committee on computer science

William F. Atchison , Samuel D. Conte , John W. Hamblen , Thomas E. Hull ,


Thomas A. Keenan , William B. Kehl , Edward J. McCluskey , Silvio O. Navarro , Werner C. Rheinboldt , Earl J. Schweppe , William Viavant , David M. Young  
Communications of the ACM March 1968  
Volume 11 Issue 3

**24** Effective access to large audiovisual assets based on user preferences 100%


 S. Ioannou , G. Moschovitis , K. Ntalianis , K. Karpouzis , S. Kollias  
Proceedings of the 2000 ACM workshops on Multimedia November 2000

Current multimedia databases contain a wealth of information in the form of audiovisual, as well as text data. Even though efficient search algorithms have been developed for either media, there still exists the need for abstract presentation and summarization of the results of database users' queries. Moreover, multimedia retrieval systems should be capable of providing the user with additional information related to the specific subject of the query, as well as suggest other topics which us ...


**25** Program Transformation Systems 100%

 H. Partsch , R. Steinbrüggen  
ACM Computing Surveys (CSUR) September 1983  
Volume 15 Issue 3


**26** The Hearsay-II Speech-Understanding System: Integrating 100%

 Knowledge to Resolve Uncertainty  
Lee D. Erman , Frederick Hayes-Roth , Victor R. Lesser , D. Raj Reddy  
ACM Computing Surveys (CSUR) June 1980  
Volume 12 Issue 2


**27** Social Analyses of Computing: Theoretical Perspectives in Recent 100%

 Empirical Research  
Rob Kling  
ACM Computing Surveys (CSUR) January 1980  
Volume 12 Issue 1

**28** Translation of Decision Tables 100%

 Udo W. Pooch  
ACM Computing Surveys (CSUR) June 1974  
Volume 6 Issue 2

**29** Automatically extracting highlights for TV Baseball programs 100%

 Yong Rui , Anoop Gupta , Alex Acero  
Proceedings of the eighth ACM international conference on Multimedia




October 2000


In today's fast-paced world, while the number of channels of television programming available is increasing rapidly, the time available to watch them remains the same or is decreasing. Users desire the capability to watch the programs time-shifted (on-demand) and/or to watch just the highlights to save time. In this paper we explore how to provide for the latter capability, that is the ability to extract highlights automatically, so that viewing time can be reduced.

We focus on the sp ...

**30** In search of invariants for e-business workloads 100%


 Daniel Menascé , Virgílio Almeida , Rudolf Riedi , Flávia Ribeiro , Rodrigo Fonseca , Wagner Meira  
Proceedings of the 2nd ACM conference on Electronic commerce October 2000

**31** A pattern approach to interaction design 100%


 Jan O. Borchers  
Conference proceedings on Designing interactive systems : processes, practices, methods, and techniques: processes, practices, methods, and techniques August 2000  
To create successful interactive systems, user interface designers need to cooperate with developers and application domain experts in an interdisciplinary team. These groups, however, usually miss a common terminology to exchange ideas, opinions, and values. This paper presents an approach that uses pattern languages to capture this knowledge in software development, HCI, and the application domain. A formal, domain-independent definition of design patterns allows for computer su

...

**32** Asynchronous information space analysis architecture using content and structure-based service brokering 100%

 Ke-Thia Yao , In-Young Ko , Ragy Eleish , Robert Neches  
Proceedings of the fifth ACM conference on Digital libraries June 2000  
Our project focuses on rapid formation and utilization of custom collections of information for groups focused on high-paced tasks. Assembling such collections, as well as organizing and analyzing the documents within them, is a complex and sophisticated task. It requires understanding what information management services and tools are provided by the system, when they appropriate to use, and how those services can be composed together to perform more complex analyses. This paper describes ...

**33 Instructible information agents for Web mining 100%**

 Mathias Bauer , Dietmar Dengler , Gabriele Paul

Proceedings of the 5th international conference on Intelligent user interfaces  
January 2000

Information agents are intended to assist their users in locating relevant information in vast collections of documents like the WWW. In many cases, e.g., when trying to integrate pieces of information from previously unrelated sources, it is not sufficient to merely identify documents containing relevant data. Instead, information agents have to identify the interesting portions of these documents and make them available for further use. T ...


**34 Multikey access methods based on superimposed coding techniques 100%**

 R. Sacks-Davis , A.. Kent , K. Ramamohanarao

ACM Transactions on Database Systems (TODS) November 1987  
Volume 12 Issue 4

Both single-level and two-level indexed descriptor schemes for multikey retrieval are presented and compared. The descriptors are formed using superimposed coding techniques and stored using a bit-inversion technique. A fast-batch insertion algorithm for which the cost of forming the bit-inverted file is less than one disk access per record is presented. For large data files, it is shown that the two-level implementation is generally more efficient for queries with a small number of matchin ...

**35 The architecture of the EXODUS extensible DBMS 100%**

 Michael J. Carey , David J. DeWitt , Daniel Frank , M. Muralikrishna , Goetz Graefe , Joel E. Richardson , Eugene J. Shekita

Proceedings on the 1986 international workshop on Object-oriented database systems September 1986


With non-traditional application areas such as engineering design, image/voice data management, scientific/statistical applications, and artificial intelligence systems all clamoring for ways to store and efficiently process larger and larger volumes of data, it is clear that traditional database technology has been pushed to its limits. It also seems clear that no single database system will be capable of simultaneously meeting the functionality and performance requirements of such a diver ...

**36 Fragmented interaction: establishing mutual orientation in virtual environments 100%**

 Jon Hindmarsh , Mike Fraser , Christian Heath , Steve Benford , Chris Greenhalgh

Proceedings of the 1998 ACM conference on Computer supported cooperative work November 1998

**37 Healthcare information architecture: elements of a new paradigm 100%**

 Daniel J. Essin , Thomas L. Lincoln

Proceedings of the 1994 workshop on New security paradigms August 1994  
An Electronic Medical Record (EMR) must provide a secure, permanent archive for an individual's medical records and also function as a multi-purpose database that supports the complex, varied activities of patient care. Meeting these objectives requires unusual flexibility in how data are retrieved and processed. Semantic and referential integrity must be preserved both over time and as chunks of information are exchanged with other systems. Relationships between data entries must be de...

- 38** An extensible constructor tool for the rapid, interactive design of query synthesizers 100%



Michelle Baldonado , Seth Katz , Andreas Paepcke , Chen-Chuan Chang , Hector Garcia-Molina , Terry Winograd  
Proceedings of the third ACM conference on Digital libraries May 1998

- 39** Harnessing technology for effective inter- and intra-institutional collaboration: report of the ITiCSE '97 working group on supporting inter- and intra-institutional collaboration 100%



Douglas Siviter , Marian Petre , Bruce Klein  
ACM SIGCUE Outlook October 1997  
Volume 25 Issue 4

- 40** GADGET: goal-oriented application design guidance for modular visualization environments 100%



Issei Fujishiro , Yuriko Takeshima , Yoshihiko Ichikawa , Kyoko Nakamura  
Proceedings of the conference on Visualization '97 October 1997

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| <b>41</b> Visualization of large terrains in resource-limited computing environments<br>Boris Rabinovich , Craig Gotsman<br>Proceedings of the conference on Visualization '97 October 1997  | 100% |
| <b>42</b> VideoQ: an automated content based video search system using visual cues<br>Shih-Fu Chang , William Chen , Horace J. Meng , Hari Sundaram , Di Zhong<br>Proceedings of the fifth ACM international conference on Multimedia November 1997  | 100% |
| <b>43</b> Harnessing technology for effective inter- and intra-institutional collaboration (report of the ITiCSE '97 working group on supporting inter- and intra institutional collaboration)<br>Douglas Siviter , Marian Petre , Bruce Klein<br>The supplemental proceedings of the conference on Integrating technology into computer science education: working group reports and supplemental proceedings June 1997 | 100% |
| <b>44</b> A multilevel approach to intelligent information filtering: model, system, and evaluation<br>J. Mostafa , S. Mukhopadhyay , M. Palakal , W. Lam<br>ACM Transactions on Information Systems (TOIS) October 1997<br>Volume 15 Issue 4<br>In information-filtering environments, uncertainties associated with changing interests of the user and the dynamic document stream must                                | 100% |

be handled efficiently. In this article, a filtering model is proposed that decomposes the overall task into subsystem functionalities and highlights the need for multiple adaptation techniques to cope with uncertainties. A filtering system, SIFTER, has been implemented based on the model, using established techniques in information retrieval and artificial intelligence ...

- 45** View-dependent simplification of arbitrary polygonal environments 100%  
David Luebke , Carl Erikson  
Proceedings of the 24th annual conference on Computer graphics and interactive techniques August 1997
- 46** Using the Internet to improve knowledge diffusion in medicine 100%  
William M. Detmer , Edward H. Shortliffe  
Communications of the ACM August 1997  
Volume 40 Issue 8
- 47** Real-time slicing of data space 100%  
Roger A. Crawfis  
Proceedings of the conference on Visualization '96 October 1996
- 48** Visualizing search results: some alternatives to query-document similarity 100%  
Lucy Terry Nowell , Robert K. France , Deborah Hix , Lenwood S. Heath , Edward A. Fox  
Proceedings of the 19th annual international ACM SIGIR conference on Research and development in information retrieval August 1996
- 49** Customizing information capture and access 100%  
Daniela Rus , Devika Subramanian  
ACM Transactions on Information Systems (TOIS) January 1997  
Volume 15 Issue 1  
This article presents a customizable architecture for software agents that capture and access information in large, heterogeneous, distributed electronic repositories. The key idea is to exploit underlying structure at various levels of granularity to build high-level indices with task-specific interpretations. Information agents construct such indices and are configured as a network of reusable modules called structure detectors and segmenters. We illustrate our architecture ...
- 50** Multiresolution analysis of arbitrary meshes 100%  
Matthias Eck , Tony DeRose , Tom Duchamp , Hugues Hoppe , Michael Lounsbery , Werner Stuetzle  
Proceedings of the 22nd annual conference on Computer graphics and interactive techniques September 1995
- 51** Protofoil: storing and finding the information worker's paper 100%

-  documents in an electronic file cabinet  
Ramana Rao , Stuart K. Card , Walter Johnson , Leigh Klotz , Randall H. Trigg  
Conference proceedings on Human factors in computing systems :  
"celebrating interdependence": "celebrating interdependence" April 1994
- 52** The design of POSTGRES 100%  
 Michael Stonebraker , Lawrence A. Rowe  
ACM SIGMOD Record , Proceedings of the 1986 ACM SIGMOD international conference on Management of data June 1986  
Volume 15 Issue 2  
This paper presents the preliminary design of a new database management system, called POSTGRES, that is the successor to the INGRES relational database system. The main design goals of the new system are to provide better support for complex objects, provide user extendibility for data types, operators and access methods, provide facilities for active databases (i.e., alerters and triggers) and inferencing including forward- ...
- 53** Linguistico-statistical approach and logics applied in documentary system 100%  
 Omar Larouk  
Proceedings of the 1993 ACM/SIGAPP symposium on Applied computing: states of the art and practice March 1993
- 54** Launching the new era 100%  
 Kazuhiro Fuchi , Robert Kowalski , Koichi Furukawa , Kazunori Ueda , Ken Kahn , Takashi Chikayama , Evan Tick  
Communications of the ACM March 1993  
Volume 36 Issue 3
- 55** Query evaluation techniques for large databases 100%  
 Goetz Graefe  
ACM Computing Surveys (CSUR) June 1993  
Volume 25 Issue 2  
Database management systems will continue to manage large data volumes. Thus, efficient algorithms for accessing and manipulating large sets and sequences will be required to provide acceptable performance. The advent of object-oriented and extensible database systems will not solve this problem. On the contrary, modern data models exacerbate the problem: In order to manipulate large sets of complex objects as efficiently as today's database systems manipulate simple records, query-processi ...
- 56** Topologically sweeping an arrangement 100%  
 H Edelsbrunner , L J Guibas  
Proceedings of the eighteenth annual ACM symposium on Theory of computing November 1986

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